

**DEPARTMENT of ENVIRONMENTAL SERVICES**  
**Water Supply & Pollution Control Division - Biology Bureau**

**LAKE TROPHIC DATA**

**MORPHOMETRIC:**

Lake: TROUT POND	Lake Area (ha):	5.50
Town: LYME	Maximum depth (m):	12.5
County: Grafton	Mean depth (m):	5.5
River Basin: Connecticut	Volume (m <sup>3</sup> ):	302000
Latitude: 43°49'33" N	Relative depth:	4.7
Longitude: 72°05'27" W	Shore configuration:	1.20
Elevation (ft): 1197	Areal water load (m/yr):	14.85
Shore length (m): 1000	Flushing rate (yr <sup>-1</sup> ):	2.70
Watershed area (ha): 152.8	P retention coeff.:	0.51
% watershed ponded: 0.0	Lake type:	natural

**BIOLOGICAL:**

**14 February 1995**

**10 August 1994**

DOM. PHYTOPLANKTON (% TOTAL)	#1	DINOBRYON 60%	OSCILLATORIA 50%
	#2	ASTERIONELLA 40%	ASTERIONELLA 35%
	#3		
PHYTOPLANKTON ABUNDANCE (units/mL)			
CHLOROPHYLL-A (µg/L)			5.81
DOM. ZOOPLANKTON (% TOTAL)	#1	ROUND CILIATE SPP. 47%	KELLICOTTIA 42%
	#2	POLYARTHRA 18%	NAUPLIUS LARVA 19%
	#3	KERATELLA 17%	KERATELLA 18%
ROTIFERS/LITER		58	114
MICROCRUSTACEA/LITER		17	49
ZOOPLANKTON ABUNDANCE (#/L)		146	171
VASCULAR PLANT ABUNDANCE			Sparse
SECCHI DISK TRANSPARENCY (m)			1.6
BOTTOM DISSOLVED OXYGEN (mg/L)		5.9	0.5
BACTERIA (E. coli, #/100 ml)	#1		
	#2		
	#3		

**SUMMER THERMAL STRATIFICATION:**

stratified

Depth of thermocline (m):	3.7
Hypolimnion volume (m <sup>3</sup> ):	83000
Anoxic volume (m <sup>3</sup> ):	30000

**CHEMICAL:**

Lake: TROUT POND  
Town: LYME

	14 February 1995		10 August 1994		
DEPTH (m)	4.0	8.0	1.0	4.0	9.0
pH (units)	6.4	6.5	7.0	6.4	6.2
A.N.C. (Alkalinity)	7.7	8.6	8.5	6.1	7.9
NITRATE NITROGEN	0.05	0.07	0.05		0.09
TOTAL KJELDAHL NITROGEN	0.22	0.25	0.50	0.40	0.44
TOTAL PHOSPHORUS	0.006	0.006	0.017	0.016	0.014
CONDUCTIVITY ( $\mu$ mhos/cm)	34.2	34.4	33.5	31.7	37.3
APPARENT COLOR (cpu)	42	42	60	38	38
MAGNESIUM			0.51		
CALCIUM			4.4		
SODIUM			0.8		
POTASSIUM			0.52		
CHLORIDE	< 2	< 2	< 2		< 2
SULFATE	6	6	4		5
TN : TP	45	53	32		38
CALCITE SATURATION INDEX			2.7		

All results in mg/L unless indicated otherwise

**TROPHIC CLASSIFICATION: 1994**

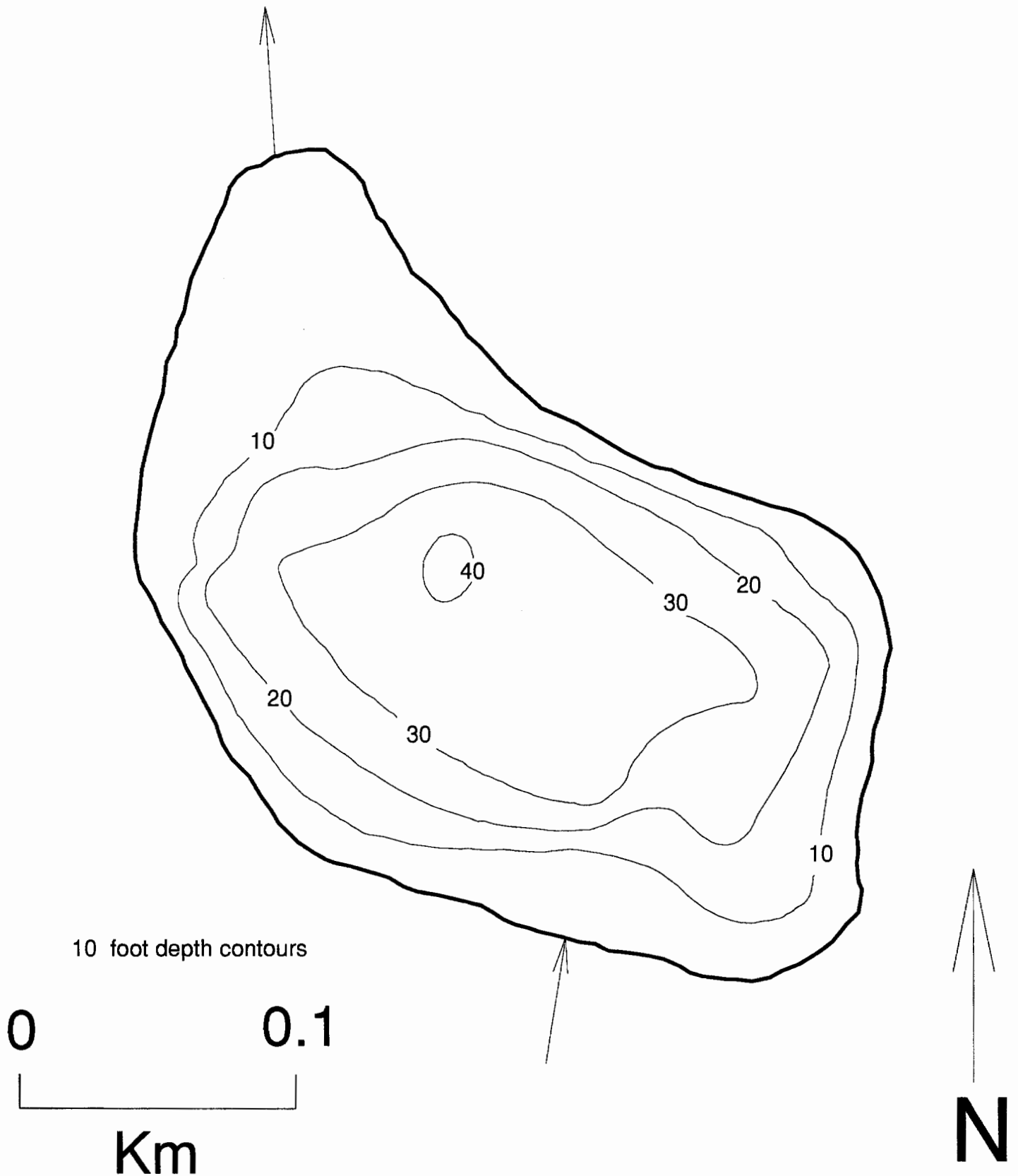
D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
6	4	0	1	11	Meso.

**COMMENTS:**

1. This is a somewhat remote pond (.5 mile hike) that was sampled cooperatively with the NH Fish and Game Department. It is also sampled regularly by helicopter as part of the Acid Rain - Remote Ponds program. It is not an acid pond but had one of the highest levels of mercury in brook trout collected to date (.6 mg/kg). The brook trout from Trout Pond were among the largest collected to date, which probably accounts for the elevated mercury levels.
2. Interestingly, the highest color value in the summer was in the surface layer, suggesting surface runoff from watershed marshes.

# Trout Pond

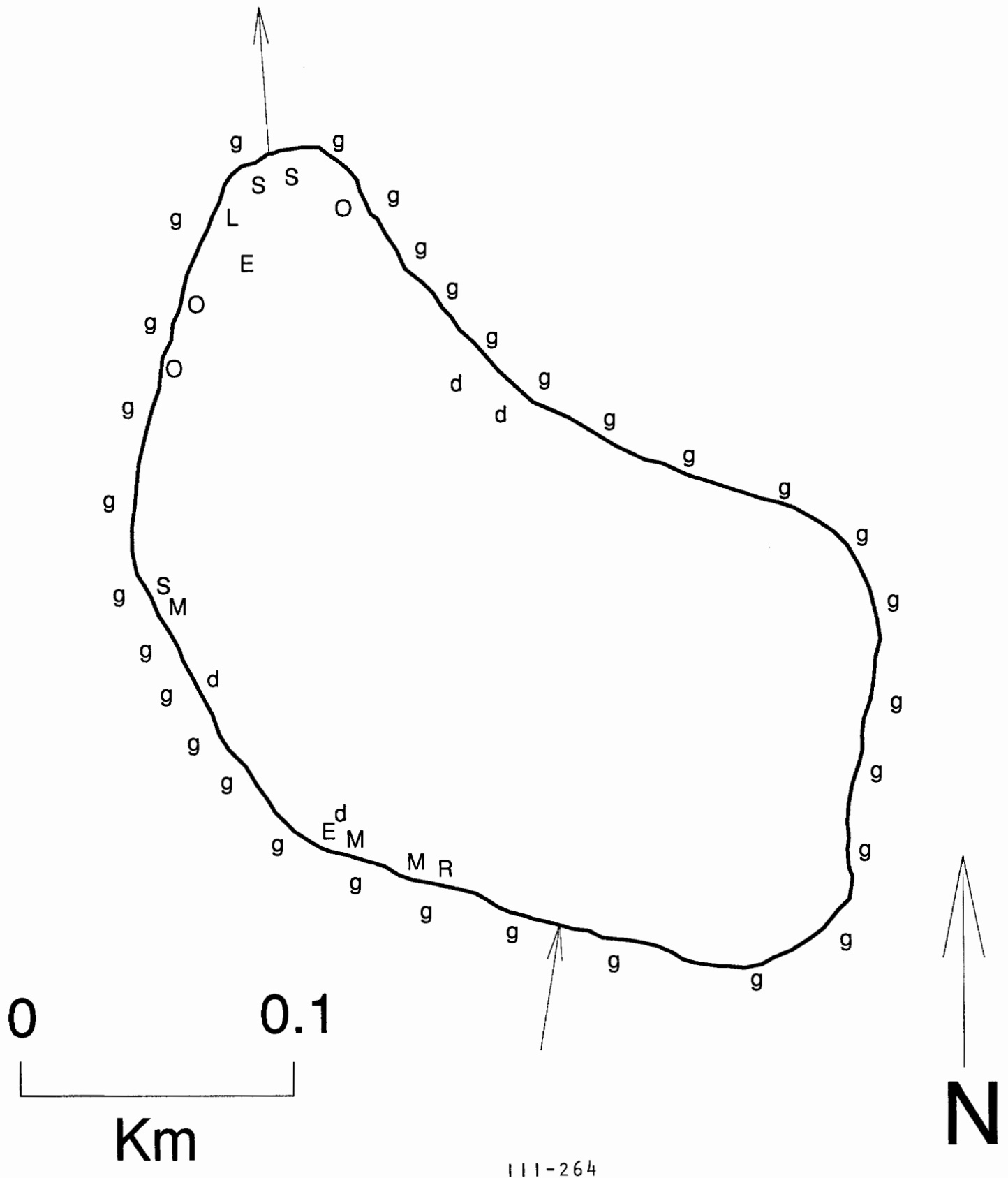
## Lyme



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# Trout Pond Lyme



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